

CLAIMS

1. Single-lip drill with a drill head on which is formed a bit, the latter being provided with at least one cutting edge for the machining by cutting of a workpiece and with the cutting edge is associated at least one chip former for shaping the chips cut off by the cutting edge, characterized in that the chip former (21) has a positive rake angle (γ).
2. Single-lip drill according to claim 1, characterized in that the rake angle (γ) is between 10 and 30°, particularly between 15 and 25°.
3. Single-lip drill according to claim 1 or 2, characterized in that the chip former (21) has a chip guide face (26) for guiding the chips (22) and at least one chip break section (27) for breaking the chips (22).
4. Single-lip drill according to claim 2 or 3, characterized in that the chip break section (27) is positioned at a distance from the cutting edge (19) suitable for setting a desired chip size.
5. Single-lip drill according to claim 4, characterized in that the distance is between 0.2 and 1.5 mm, particularly between 0.3 and 0.6 mm.
6. Single-lip drill according to one of the preceding claims, characterized in that the chip former (21) is constructed as a slot adjacent to the cutting edge (19) and in particular as a slot with a substantially U-shaped cross-section.
7. Single-lip drill according to one of the preceding claims, characterized in that a functional coating (29), preferably for increasing wear resistance, is provided on at least one functional surface of the single-lip drill (29).

8. Single-lip drill according to claim 7, characterized in that at least the chip former (21) and/or at least one clearance (20) is provided with the functional coating (29).

9. Single-lip drill according to one of the claim 7 or 8, characterized in that the functional coating (29) is provided on all the functional surfaces participating in the cutting process.

10. Single-lip drill according to one of the claims 7 to 9, characterized in that the functional coating (29) is at least partly made from hard material, particularly metallic hard material.

11. Single-lip drill according to claim 10, characterized in that a nitride or carbide, particularly a light metal nitride is provided as the metallic hard material.

12. Single-lip drill according to claim 11, characterized in that titanium aluminium nitride is provided as the light metal nitride.

13. Single-lip drill according to one of the claims 7 to 12, characterized in that the functional coating (29) has several layers (29a, 29b).

14. Single-lip drill according to claim 13, characterized in that at least one hard material layer (29a) and at least one soft material layer (29b) adjacent to the hard material layer is provided, the hard material layer (29a) forming an outer layer.

15. Method for the manufacture of a single-lip drill, particularly a single-lip drill according to one of the preceding claims, the method comprising the following steps:

- manufacturing a drill head with a single-lip drill geometry,
- applying a chip former in the vicinity of a bit of the single-lip drill,
- coating at least part of the surface of the drill head with a functional coating.

16. Method according to claim 15, characterized in that the functional coating is applied following a resharpener, particularly a regrinding of the drill head.

17. Method according to claim 15 or 16, characterized in that at least the chip former is coated.

18. Method according to one of the claims 15 to 17, characterized in that all the surfaces participating in the cutting process are coated.

19. Method according to one of the claims 15 to 18, characterized in that a chip former with a positive rake angle is formed.

20. Method according to one of the claims 15 to 19, characterized in that the chip former is constructed as a slot adjacent to the cutting edge of the bit and in particular with a U-shaped cross-section.